

CLAIMS

1. Safety system for a roller grinding mill (2) having a milling chamber (3) with a rotary milling surface (5) and milling rollers (6a to 6f) rolling thereon,  
characterized in that  
a continuous availability of at least four milling rollers (6a to 6d) is ensured through the provision of more than four milling rollers (6a to 6f) and four milling rollers (6a to 6d) in a four-roller operation provide approximately 80% of the full milling capacity of the roller mill (2).
2. Safety system according to claim 1,  
characterized in that  
six milling rollers (6a to 6f) are provided and for a four-roller operation an almost 100% redundancy exists on the milling roller side.
3. Safety system according to claim 1 or 2,  
characterized in that  
each milling roller (6a to 6f) can be swung out from an operating position into a service position and four-roller operation is ensured when the milling rollers (6a, 6d or 6b, 6e or 6c, 6f) are swung out.
4. Safety system according to one of the preceding claims,  
characterized in that  
there are six milling rollers (6a to 6f) in accordance with the per se known modular system, in which in each case one pedestal (9) and one rocking lever (10) is provided for supporting a milling roller (6a to 6f), together with a

hydropneumatic spring suspension system (11) for a milling roller pair (6a, 6d, 6b, 6e, 6c, 6f) and a 3 x 2 roller mill is formed.

5. Safety system according to claim 4,  
characterized in that  
in the case of breakdowns or damage to the milling rollers (6a to 6f), rocking levers (10) or spring suspension systems (11), the roller mill (2) can be operated with four milling rollers (6b, 6e, 6c, 6f or 6a, 6d, 6c, 6f or 6a, 6d, 6b, 6e) and 80% of the full mill capacity following a brief stoppage and swinging out of one milling roller pair (6a, 6d or 6b, 6e or 6c, 6f) for repair purposes.
6. Method for the production of cement in a combined plant, in which in a cement raw material plant cement raw material (23) undergoes mill drying in a roller grinding mill (2) with the aid of milling rollers (6a to 6f) rolling on a rotary milling surface (5) and accompanied by the supply of hot gases, particularly waste gases (12) from a heat exchanger unit (42) and a cooling tower (32) and following classifying and separation of the raw powder (30) from the raw powder-waste gas mixture (19) in a cyclone unit (27) and/or a filter (28) is fed via a heat exchanger unit (42) to a precalciner (41) and/or rotary kiln (40),  
characterized in that  
more than four milling rollers (6a to 6f) are provided in the roller mill (2) for a milling roller-side, almost 100% redundancy and the roller mill (2) is designed in such a way that 80% of the full mill capacity is provided by four milling rollers (6a, 6d, 6b, 6e or 6b, 6e, 6c, 6f or 6a, 6d, 6c, 6f).
7. Method according to claim 6,  
characterized in that

six milling rollers (6a to 6f) are provided for a 3 x 2 roller mill for the mill drying of cement raw material (23).

8. Method according to claim 6 or 7,

characterized in that

the six milling rollers (6a to 6f) are arranged according to the per se known modular system, one module being in each case formed by a pedestal (9) with a rocking lever (10), a milling roller (6a to 6f) and a hydropneumatic spring suspension (11), and that in the case of a breakdown or damage to a milling roller (6a to 6f), a rocking lever (10) or a hydropneumatic spring suspension system (11) or wearing parts of the milling rollers (6a to 6f) the rolling mill (2) is stopped, a rocking lever-milling roller unit (10, 6a, 6d) is swung out pairwise from the operating position into a service position and the further operation of the roller mill (2) takes place with the remaining four milling rollers (6b, 6e; 6c, 6f).

9. Method according to claim 8,

characterized in that

the rocking lever-milling roller unit (10, 6a, 6d) swung out into the service position are repaired during the four-roller operation of the roller mill (2).